



## Navy Environmental Restoration Program Update National Aeronautics and Space Administration (NASA) Crows Landing Flight Facility

[Former Naval Auxiliary Landing Field, Crows Landing]

The purpose of this fact sheet is to provide an update on the status of the Navy's environmental restoration program projects at the NASA Crows Landing Flight Facility (the Facility), formerly known as the Naval Auxiliary Landing Field (NALF), Crows Landing in Stanislaus County, California. This fact sheet describes the work that was accomplished during October and November 2001.

### Underground Storage Tank (UST) Program:

Seventeen (17) Underground Storage Tanks (USTs) were located at the Facility and all USTs were removed by 1994. Corrective actions were conducted at Tank Sites CL-1, CL-2, and CL-3 (known as UST Cluster 1); Tank Sites CL-7, CL-8, and CL-9 (known as UST Cluster 2); and UST Site 109. Field sampling activities were conducted at UST Site 117 and UST CL-40. The Regional Water Quality Control Board, Central Valley Region – the oversight agency for the UST Program – has determined that no further response actions are required at eight (8) of the seventeen sites.

As of late November 2001, portable soil vapor extraction (SVE) treatment units have removed approximately 20,800 pounds of petroleum from the soil at UST Cluster 1, the former location of three aviation gasoline storage tanks, near the east-central section of the Facility. Petroleum vapor concentrations continued to decrease during October and November 2001.

A portable SVE unit has been utilized for testing activities at four (4) vapor extraction wells at UST Cluster 2 which is located in the northeastern section of the Facility. More

than 2,000 pounds of petroleum hydrocarbons were removed from the soil at UST Cluster 2 during 2001.

SVE/biovent testing activities at UST Site 109 during 2001 resulted in the removal of approximately 300 pounds of petroleum hydrocarbons from the soil.

The groundwater beneath UST Cluster 1 and UST Site 117 is impacted with petroleum hydrocarbons and solvents, and the groundwater plume is being managed as the Administration Area Plume (the Plume) under the Installation Restoration Program (IRP) for Site 17.

### Installation Restoration Program:

#### Site 11

Site 11 (former disposal pits) is located near the center of the Facility, between the two runways. The former disposal pits were believed to have been used from the 1960's through the 1980's for the disposal of facility household and industrial refuse and ordnance materials from the practice ranges located west of the facility. A revised draft feasibility study that includes an evaluation of remedial alternatives was issued in November 2001.

#### Site 11A

The Site 11A (sewer systems) includes two former sewage treatment plants - one located near the east-central section of the Facility that was constructed in approximately 1943 (original plant) and one located near the northern boundary of the Facility that was constructed in the early 1950's (most currently used plant). A passive soil gas survey was conducted in the summer 2001, and plans for future soil sampling activities were in development in November 2001.

#### Site 17

Site 17 includes the demolished hangar area, where former aircraft maintenance hangars were located, and the underlying groundwater plume that is also known as the Administration Area Plume (the Plume), a commingled plume consisting of petroleum hydrocarbons and solvents. The primary sources of petroleum hydrocarbons in groundwater are former petroleum storage tanks. Carbon tetrachloride, chloroform, 1,2-dichloroethane (1,2-DCA (an additive in gasoline)), and gasoline have been identified in the Plume. A revised draft feasibility study report was issued in June 2001, and the Navy issued responses to review comments in October and November 2001.

Time-critical removal actions were initiated in December 2000 to remove contamination from a source area near a former dry well at the southern section of the Plume. The former dry well is located within the UST Cluster 1 facility. Transitional groundwater extraction activities near the former dry well continued on an intermittent basis during October and November 2001.

Field activities began in September 2001 for time-critical removal actions to remediate contamination near UST Site 117 and the carbon tetrachloride source area. Groundwater extraction activities, which began in September 2001, are anticipated to continue on an intermittent basis until the final remedy is developed. In situ treatment activities may be conducted concurrently with groundwater extraction. Extracted groundwater is transported to an off-site facility for treatment.

The Navy has conducted routine groundwater monitoring activities on a quarterly basis during the period from November 2000 through November 2001. Approximately 20 wells have been sampled during each monitoring event, and samples have been collected from IRP Site 11, IRP Site 17, UST Cluster 1, UST Cluster 2, and UST Site 109. The next sampling event is scheduled for February 2002. Groundwater sampling activities were conducted at some wells during ten or more quarterly sampling events during the period from 1995 through 1998.

Contaminant concentrations in samples collected from some of the wells at the Plume have decreased significantly with time according to the routine monitoring information. Additionally, concentrations appear to decrease significantly with distances from the source areas. Significant decreases have not been observed at all locations within the Plume, however, natural degradation of the contaminants appears to be occurring. Based upon the results of the groundwater monitoring activities, the Navy is considering monitored natural attenuation as a possible remedy for the Plume.

Selected information from the routine groundwater sampling activities is shown on Charts 1 and 2. Contaminant concentrations are presented in micrograms per liter, and one microgram per liter is equivalent to one part per billion.

Chart 1 shows the decreases in carbon tetrachloride concentrations with distance from the source area in the vicinity of well 17-MW-02 (S) on the western side of the Plume. The highest carbon tetrachloride concentrations have been measured at well 17-MW-02(S) or the wells closest to well 17-MW-02(S). Chart 2 shows the decrease in benzene concentrations from 1996 until 2001 for samples collected from well 17-MW-13(MS). Well 17-

MW-13(MS) is located approximately 300 feet south of well 17-MW-02(S).

Chart 1. Attenuation of Carbon Tetrachloride Concentrations with Distance from the Carbon Tetrachloride Source near Well 17-MW-02(S) near the western side of the Plume. Well 17-MW-02(S) and Well 17-MW-08(S) are screened from approximately 50 to 75 feet below ground surface. Well 17-MW-08(S) is located north-northeast of Well 17-MW-02(S). Groundwater samples were collected during the January 2001 sampling event.

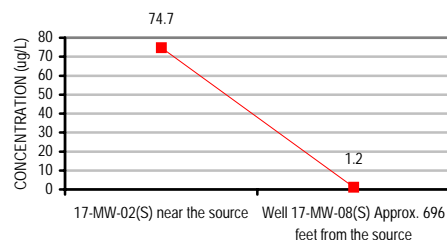
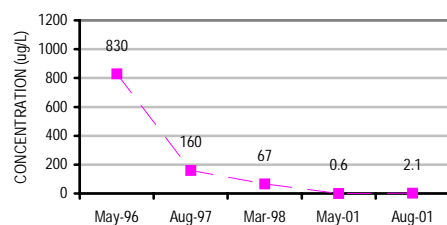


Chart 2. Attenuation of Benzene Concentrations from 1996 to 2001 at Well 17-MW-13 (MS) located south of the Carbon Tetrachloride Source. Well 17-MW-13(MS) is screened from 95 to 105 feet below ground surface.



### Historical Background

The former NALF Crows Landing was commissioned in May 1943 and has served primarily as an auxiliary airfield for operations from Naval Air Station, Moffett Field. The Navy closed the Facility in 1994 in accordance with the Base Realignment and Closure (BRAC) Act. The Facility was transferred to NASA on July 1, 1994. In October 1999, NASA was authorized by legislative act of the 106<sup>th</sup> Congress of the United States of America to transfer the facility to Stanislaus County. California Environmental Quality Act (CEQA) documentation, including a reuse strategy, was released by Stanislaus County for public review in January 2001.

The Navy is responsible for the restoration of contaminated sites that were the result of historical Navy operations at the Facility. The Navy is the lead agency for the implementation of the environmental restoration program, and regulatory oversight is provided by the California Regional Water Quality Control Board, Central Valley Region and the California Department of Toxic Substances Control.

**OPPORTUNITIES FOR COMMUNITY INVOLVEMENT**

The Navy will provide periodic updates to the community in fact sheets, and the most current project correspondence, plans, reports, and other documents are available at the local information repository at the Patterson Branch Library for inspection by the public. If you have comments or questions, please send them to Ms. Marianna Potacka, Southwest Division, Naval Facilities Engineering Command, 1220 Pacific Highway, San Diego, CA 92132-5190.

**ENVIRONMENTAL RESTORATION PROGRAM  
MAILING LIST UPDATE FORM**

To better serve the community regarding the Navy's Environmental Restoration Program projects at the NASA Crows Landing Flight Facility, we are continuing to update our mailing list. If you would like to receive copies of fact sheets and proposed plans, please complete the form and return to the following address:

Southwest Division, Naval Facilities Engineering Command  
BRAC Programs  
Code 06CC.LMH (Lynn Marie Hornecker)  
1220 Pacific Highway  
San Diego, California 92132-5190

Or Fax the form to Southwest Division, Naval Facilities Engineering Command at (619) 532-0780.

**Mailing Box – Please provide all information:**

Name: \_\_\_\_\_

Organization: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

State and Zip Code: \_\_\_\_\_

-----  
Telephone (optional): \_\_\_\_\_

E-mail (optional): \_\_\_\_\_

**FOR MORE INFORMATION**

For more information pertaining to specific projects, please contact:

Ms. Marianna Potacka  
BRAC Environmental Coordinator  
Southwest Division, Naval Facilities Engineering Command  
1220 Pacific Highway  
San Diego, California 92132-5190  
Telephone: (619) 532-0941  
E-mail: [Potackamk@efdswnavfac.navy.mil](mailto:Potackamk@efdswnavfac.navy.mil)

Or

Ms. Lynn Marie Hornecker  
Project Manager  
Southwest Division, Naval Facilities Engineering Command  
1220 Pacific Highway  
San Diego, California 92132-5190  
Telephone: (619) 532-0783; Fax: (619) 532-0780  
E-mail: [Horneckerlm@efdswnavfac.navy.mil](mailto:Horneckerlm@efdswnavfac.navy.mil)

**INFORMATION REPOSITORY**

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Administrative Record documents are available at the Information Repository at the Stanislaus County Library, Patterson Branch in Patterson. The Information Repository also includes an index of all documents contained within the CERCLA Administrative Record. Remedial investigation reports, underground storage tank reports, and other documentation pertaining to the Navy's environmental restoration program are maintained in the CERCLA Administrative Record at Southwest Division, Naval Facilities Engineering Command in San Diego. For assistance with the CERCLA Administrative Record or requests for copies of documents contained within the CERCLA Administrative Record, please contact the records manager, Ms. Diane Silva, at (619) 532-3676.

Southwest Division  
Naval Facilities Engineering Command  
1220 Pacific Highway  
San Diego, California 92132-5190

MAILING LABEL